

A PRESENTATION FOR THE
GOVERNOR'S SUMMIT ON INFANT MORTALITY
MARCH 1ST, 2013



**Cabinet for Health and Family Services
Department for Public Health**

**Prichard Committee
Strong Start Initiative**

Then

Where Research has taken us

Now

Brain development depends on genes.

Brain development hinges on complex interplay between genes & experiences.

Experiences before age 3 have limited impact later in life.

Experiences before age 3 have decisive impact on adult capabilities.

Secure attachment creates favorable context for early development and learning.

Secure attachment directly effects the way the brain is wired not just an overall context.

Brain development is linear across all knowledge areas and skills.

Brain development is non-linear including prime times for different knowledge areas & skills.

Toddler's brain less active than adult's, for example busy college student.

Toddler's brain is twice as active as adult brain – activity drops during adolescence & doesn't recover.

THE SCIENCE OF EARLY CHILDHOOD DEVELOPMENT

- Brain is not mature at birth
 - The brain continues to remodel birth thru 5
- Brain is changed by experiences
 - “use it or loose it” – “hardwiring” of the brain
- Critical periods imply timing is important
 - Experiences during critical periods can result in irreversible changes
- Relationships program social emotional function
 - Social-emotional bonds with caregivers hardwire the pathways for later social and cognitive development
- Adversity impacts brain development

WHAT IS HANDS?

Health Access Nurturing Development Services

- ❖ Voluntary, intensive weekly home visitation
- ❖ First time moms and dads
- ❖ Regardless of income
- ❖ Prenatal to two years of age
- ❖ Designed to improve both health & social outcomes



GOALS

- ❖ **Positive pregnancy outcomes**
- ❖ **Optimal child growth and development**
- ❖ **Children live in healthy and safe homes**
- ❖ **Family self - sufficiency**



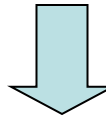
The Process



Prenatal and up to the child is 12 weeks of age !

SCREEN

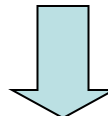
- ❖ Nationally proven tool
- ❖ Risk factors identified



(within one month)

ASSESSMENT

- ❖ Completed by professional
- ❖ 10 focus areas



(linked immediately, visit within one week)

HOME VISIT

Home Visit



Home Visitors focus on:

HEALTH: Prenatal Health & Development, Child Health & Development

Medical Homes, Immunizations / Well-Child

- ❖ Prenatal Development – prenatal care, nutrition, premature labor, birth plans, smoking, dangers of drugs and alcohol, etc.
- ❖ RN/SW quarterly visits – focus on preventive health (basic care, dealing with stress, breastfeeding, Back to Sleep, etc.)
- ❖ Referrals –physician, dentist, mental health specialist, etc.
- ❖ Appropriate use of healthcare resources

Child Safety Checklists- Injury Prevention

Developmental Screens

- ❖ Ages & Stages Developmental Screening
- ❖ Ages & Stages Social-Emotional Screening

Home Visit



SOCIAL: Parent-Child Interactive Curriculum

Growing Great Kids Curriculum

- Focus on basic care, child development,
- Nurturing parent child relationships and,
- Strength based support to families

❖ Modules 0-3 years

- Attachment, Bonding and Caring for Your New Family
- Basic Care
- Social and Emotional Development
- Cues and Communication
- Physical Development and Brain Development
- Play and Stimulation

Home Visit



FAMILY FUNCTIONING: Home Visitors assist families on:

Family Goals

- What I want for my family / my child
- Why this is important
- What resources will help
- What are the steps to take
- What might get in the way
- How will things be different

Support & Referral

HANDS FACTS

- In all 120 Kentucky counties
- Serving 10,000- 11,000 families annually
- Providing:
 - over 700 home visitation services on a daily basis
 - over 14,000 home visitation services on a monthly basis

In FY13 (July-January):

Families- 7,229

Assessments- 3,200

Professional Visits – 44,091

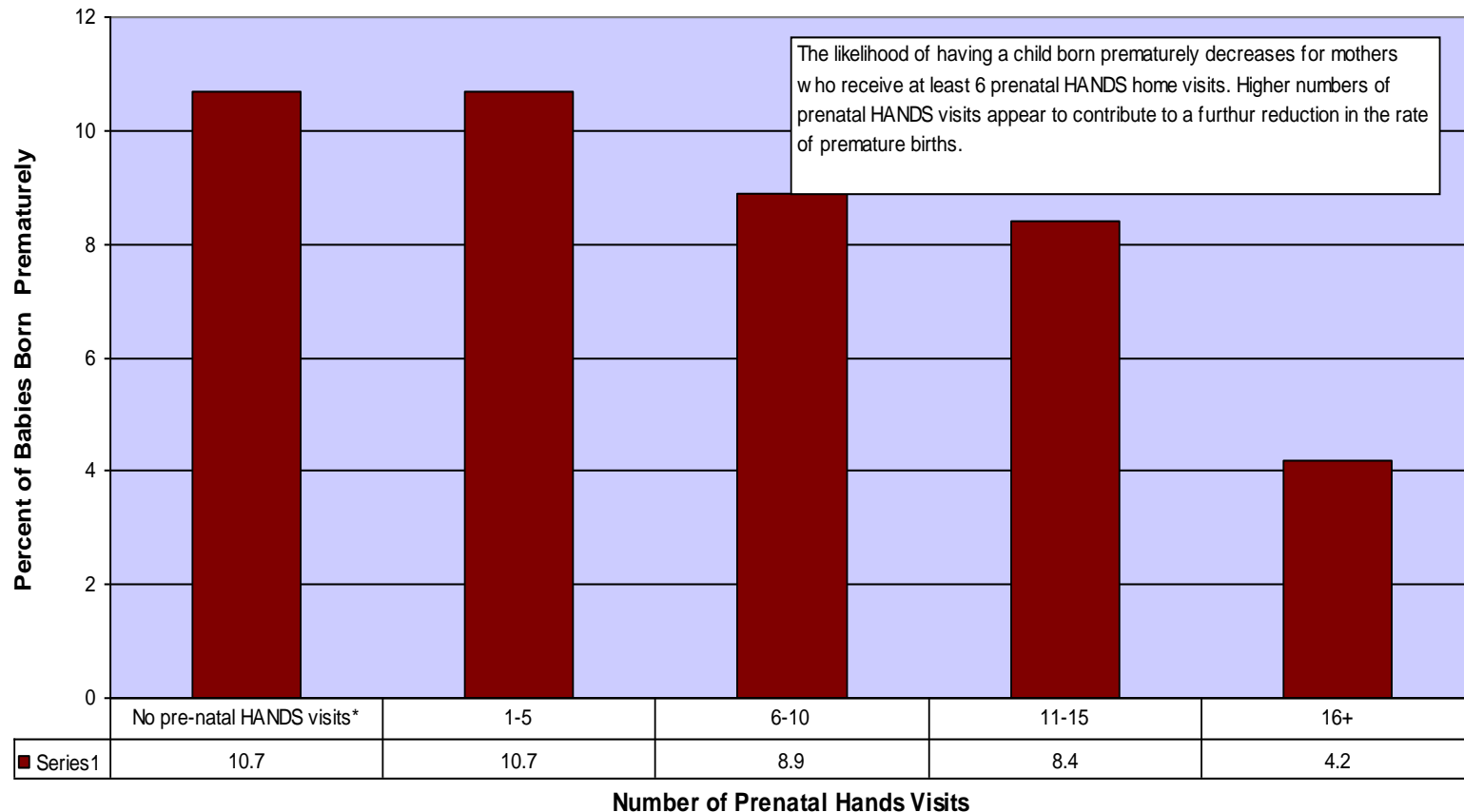
Paraprofessional Visits – 48,036

OUTCOMES FROM OUTSIDE EVALUATORS

- ❖ *31% less Prematurity (6+ visits)*
- ❖ *33% less Low Birth weight (6+ visits)*
- ❖ *70% less Infant Mortality (1+ visits)*
- ❖ *Fewer developmental delays (12+ visits)*
- ❖ *50% less ER Usage (1+ visits)*
- ❖ *29-40% less Child Abuse and Neglect (based on engagement)*
- ❖ *26% improved/increased Education (based on intake and exit data)*

PREMATURITY BY # VISITS

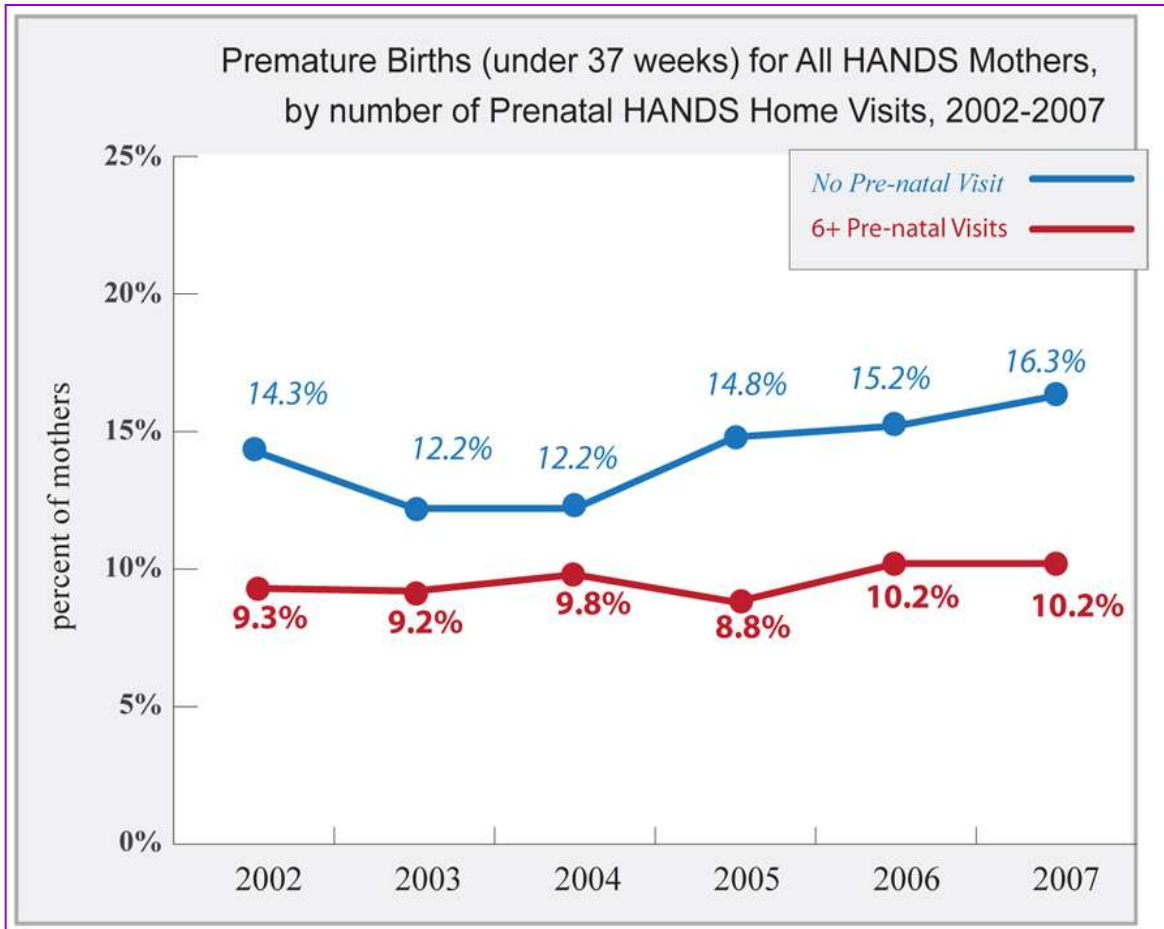
Prematurity and Number of Prenatal HANDS Home Visits
(based on 2000-2003 data for all teen mothers with no prior pregnancies, n=19,369)



Note: May include families who received subsequent post-natal HANDS visits.

Data sources: Kentucky Vital Statistics Data and HANDS participant database

PREMATURITY – 31 % LESS



Mothers who participated in at least 6 prenatal home visits were less likely to deliver a baby prematurely (before 37 weeks of gestation), as compared to eligible mothers who received no prenatal HANDS visits.

Comparison of HANDS and Non-HANDS ER Utilization Rates, 2004 -2006

Of the 104 counties studied, HANDS recipients demonstrated lower rates of ER usage in all but two counties.

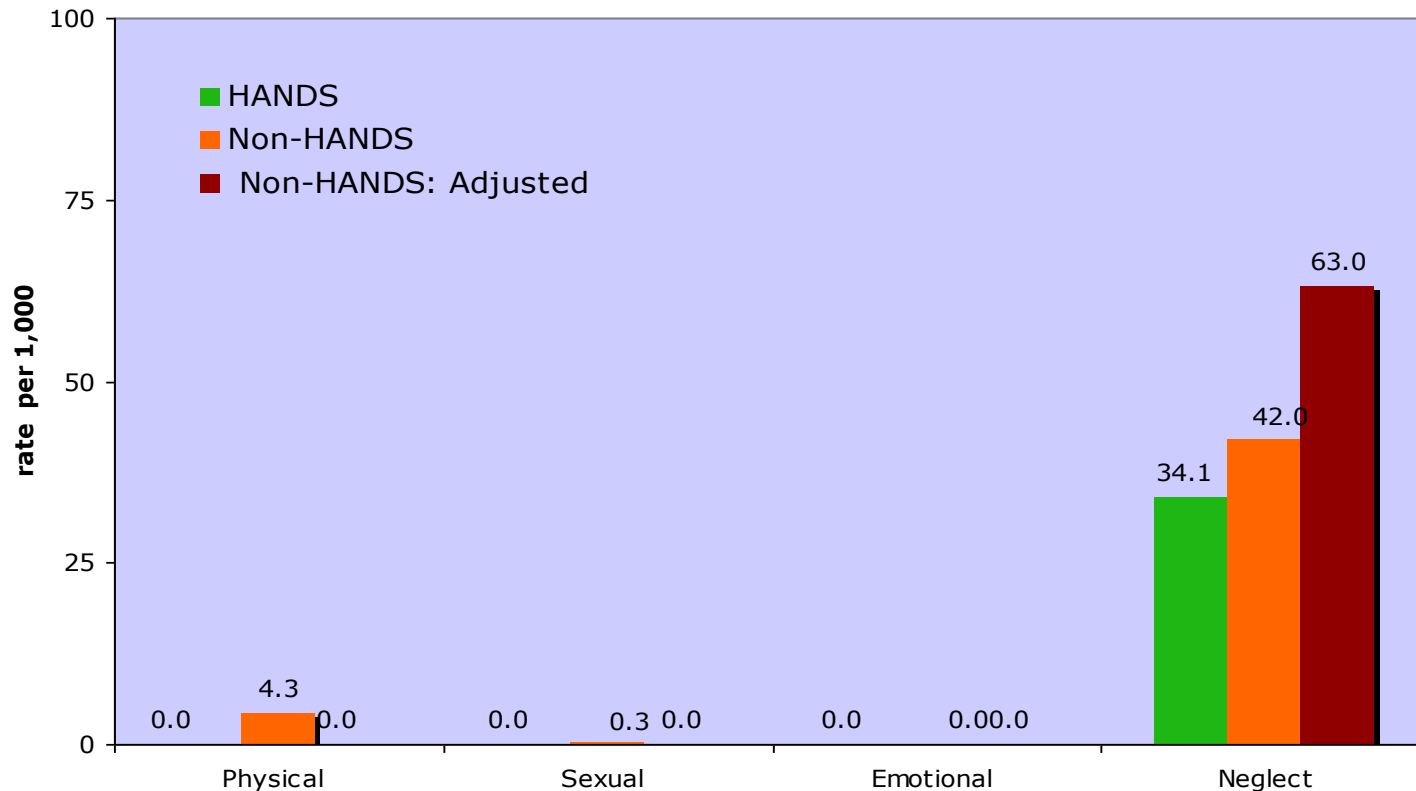


CHILD ABUSE AND NEGLECT

Rates of Substantiated Abuse or Neglect (Teen Mother as Perpetrator)

Comparison of HANDS (n = 497) and Non-HANDS (n = 2,390) cohorts from 2002 Live Birth Data

A recent comprehensive meta-analysis of research by the Task Force on Community Preventive Services (Bilukha et al., 2005) demonstrated that families participating in home-visiting programs were more likely to be reported to child protective services (CPS), a systematic bias related to increased surveillance.



DEVELOPMENTAL DELAYS

Ages and Stages Developmental Screening

n=1600

Domain	Number expected to be identified by screen with possible DD	Number of HANDS children positively screen for possible DD
Communication	37	16
Gross Motor	37	30
Fine Motor	37	9
Problem Solving	37	27
Personal-Social	37	22

HANDS participants exceed the norm group in every area; in other words, a smaller percentage in the HANDS group evidence sub-par functioning at one year than is seen in the normative group.

HANDS participants with twelve or more home visits are developing at or above levels consistent with their developmental peers who are not high risk

FAMILY SELF – SUFFICIENCY

- **EDUCATION**

- 2006 -Increased or improved education 21%
(n=2,325)
- 2008 – Increased or improved education 26%
(n=1,246)



- **EMPLOYMENT in participants**


- 2006 - Increased from 18% initially to 31% at end of intervention
(n=1,919)
- 2008 – Increased from 14% initially to 28% at the end of intervention
(n=1,246)

OUTCOMES FROM OUTSIDE EVALUATORS

New Studies

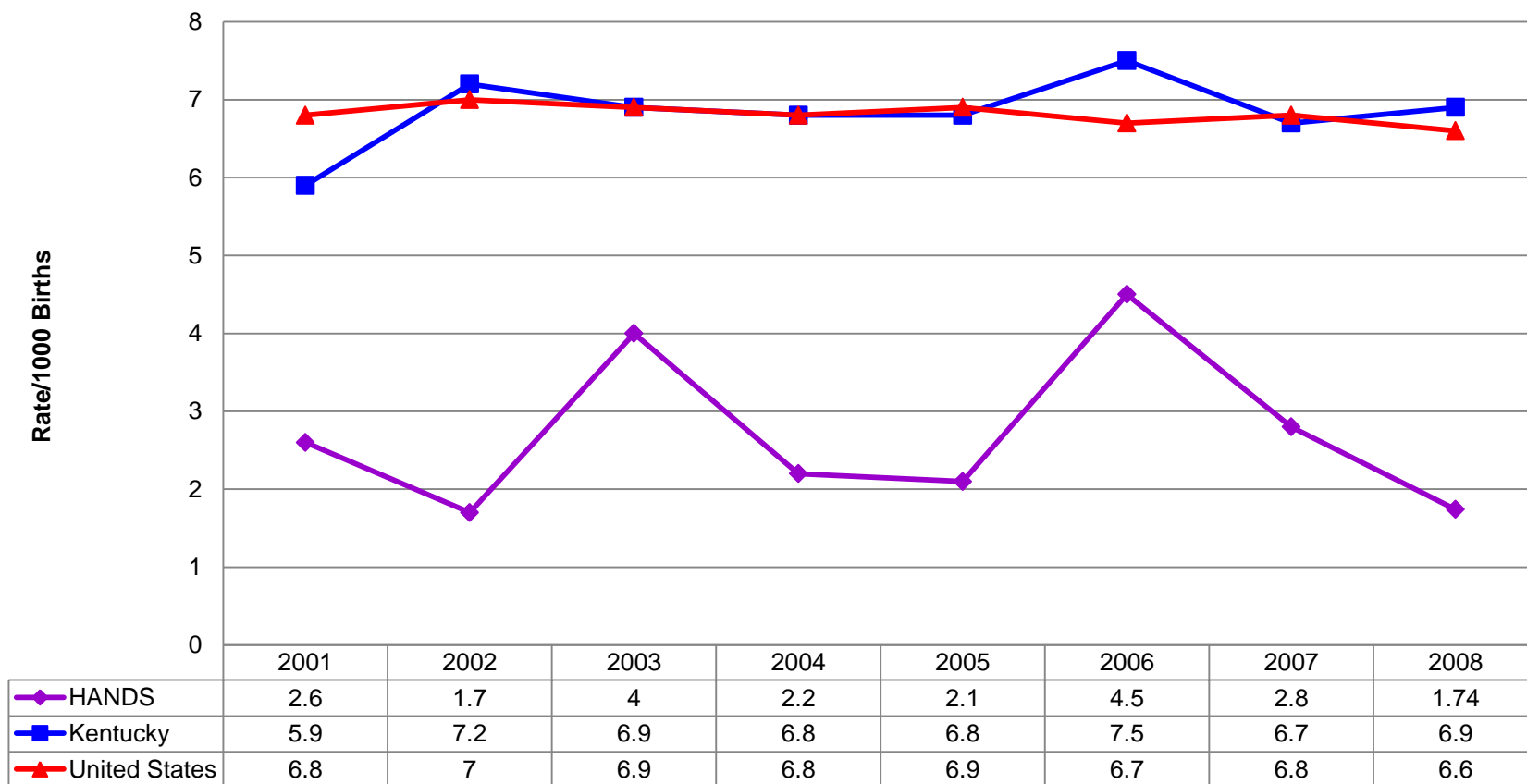
(all based on 1+ prenatal HANDS visits)

UNIVERSITY OF KENTUCKY RESEARCHERS*, REACH**

- ❖ ***10% less Prematurity (1+ visits)*****
 - ❖ ***14% less Low Birth weight (1+ visits)*****
 - ❖ ***74% less Infant Mortality (1+ visits)*****
 - ❖ ***5% increase in Adequate Prenatal Care****
 - ❖ ***18% increase in Breastfeeding****
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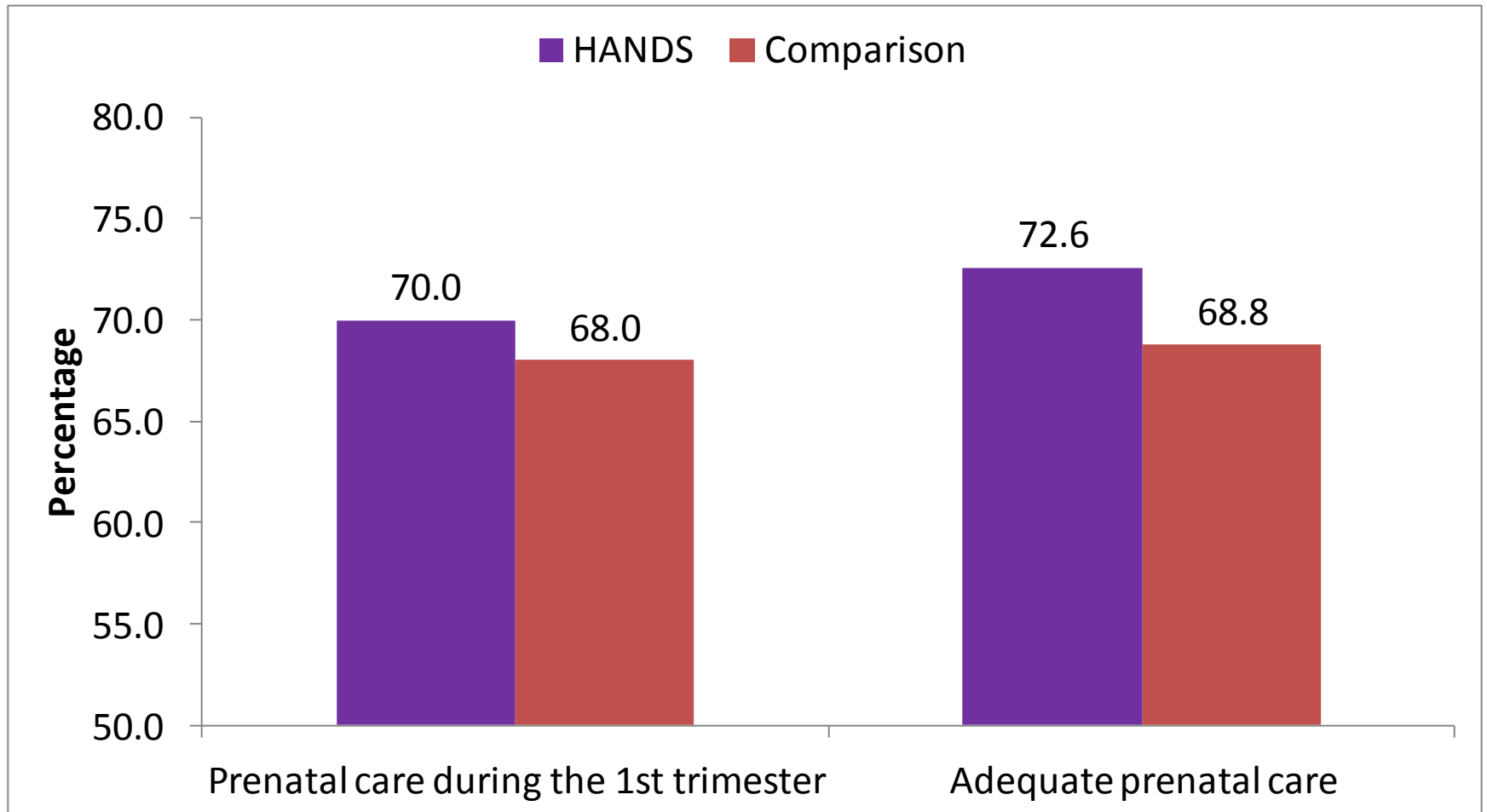
INFANT MORTALITY— 74% LESS

Comparative Infant Mortality Rates for HANDS, KY and US

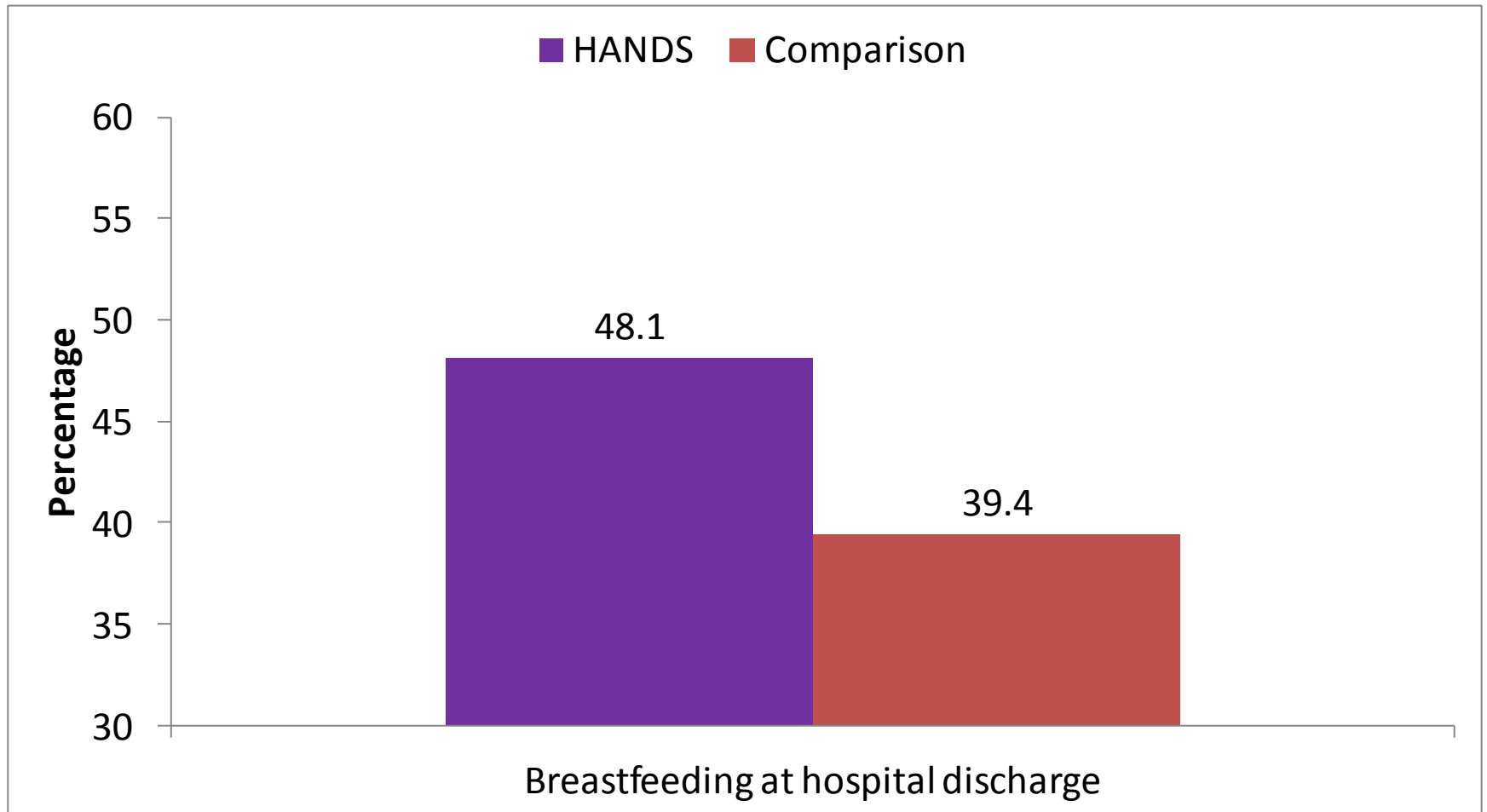


State and National data derived from KIDS Count and KY Department of Public Health data tables. HANDS data derived from Vital Statistics data.
 Rates per 1000 live births. HANDS mortality rate 2001-2005 calculated by REACH. HANDS mortality rate 2006 – 2007 calculated by HANDS central office.

ADEQUATE PRENATAL CARE(2008)



BREASTFEEDING (2008)



ECONOMIC BENEFITS

❖ *Job Creation*

- ❖ *HANDS –Over 500 employees -through local health departments in all 120 counties.*
- ❖ *Federal grant expansion is helping LHD employees continue to be employed where other funding has decreased*

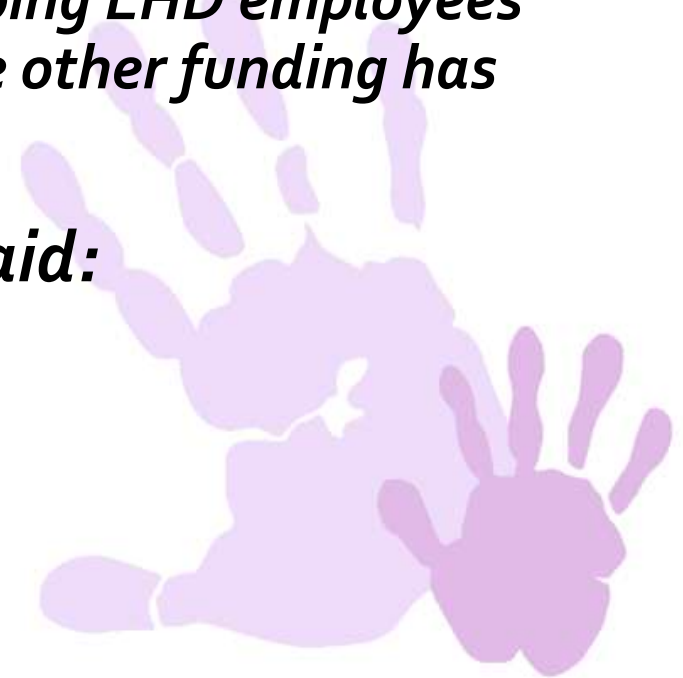
❖ *Cost avoidance for KY Medicaid:*

❖ *Less Prematurity*

- ❖ *Avg. Medicaid Cost per case: \$27,000*
- ❖ *Estimated annual averted cost \$5.3M*
(minimal engagement; net after program costs)

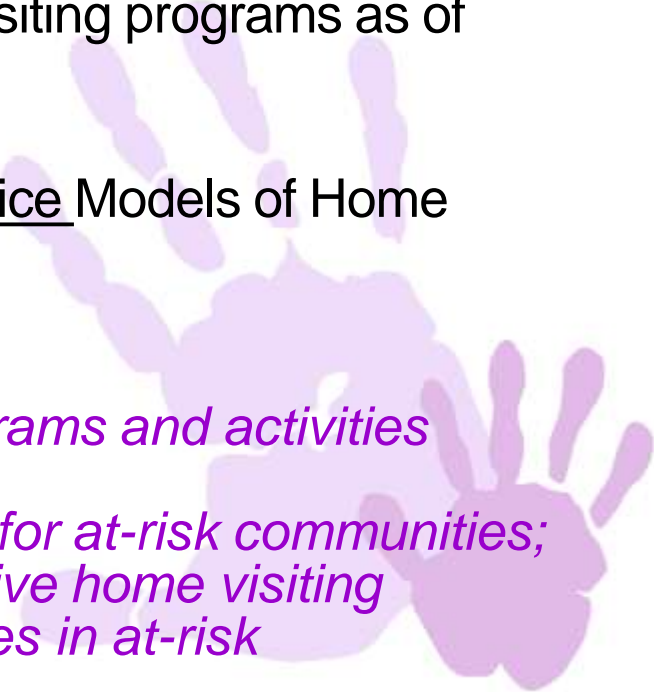
❖ *Less ER Usage*

- ❖ *Cost per case: \$423*
- ❖ *Estimated annual averted cost \$5.7M*



FEDERAL OPPORTUNITY TO EXPAND THROUGH TITLE V OF THE SOCIAL SECURITY ACT

❖ **Maternal, Infant, and Early Childhood Home Visiting Program** (MIECHV -P.L. 111-148)

- \$1.5 billion over 5 years ; to be eligible, requires states maintain current funding (MOE) for existing home visiting programs as of March 2010
 - Implementation of Evidence Based Practice Models of Home Visiting
 - Purpose:
 - *to strengthen and improve the programs and activities carried out under Title V;*
 - *to improve coordination of services for at-risk communities;*
 - *to identify and provide comprehensive home visiting services it improve outcomes for families in at-risk communities*
- 

MIECHV Grant Benchmark Areas

❖ EXTENSIVE DATA TO BE REPORTED ANNUALLY WITH FEDERAL GRANT seeking improvement in the following areas:

- 1) Improved maternal and newborn health;
- 2) Child injuries, child abuse, neglect, or maltreatment, and reduction of emergency department visits;
- 3) Improvements in school readiness and achievement;
- 4) Domestic violence;
- 5) Family economic self-sufficiency; and
- 6) Coordination and referrals for other community resources and supports.

Needs Assessment

Data to Identify Communities At Risk

A. Identify Communities with high concentrations of

- premature birth,
- low-birth weight infants
- infant mortality, including
- infant death due to abuse/ neglect,
- smoking in pregnancy (other indicators of at-risk families)
- poverty
- crime
- unemployment
- high rates of high-school drop-outs
- substance abuse
- domestic violence
- child maltreatment.

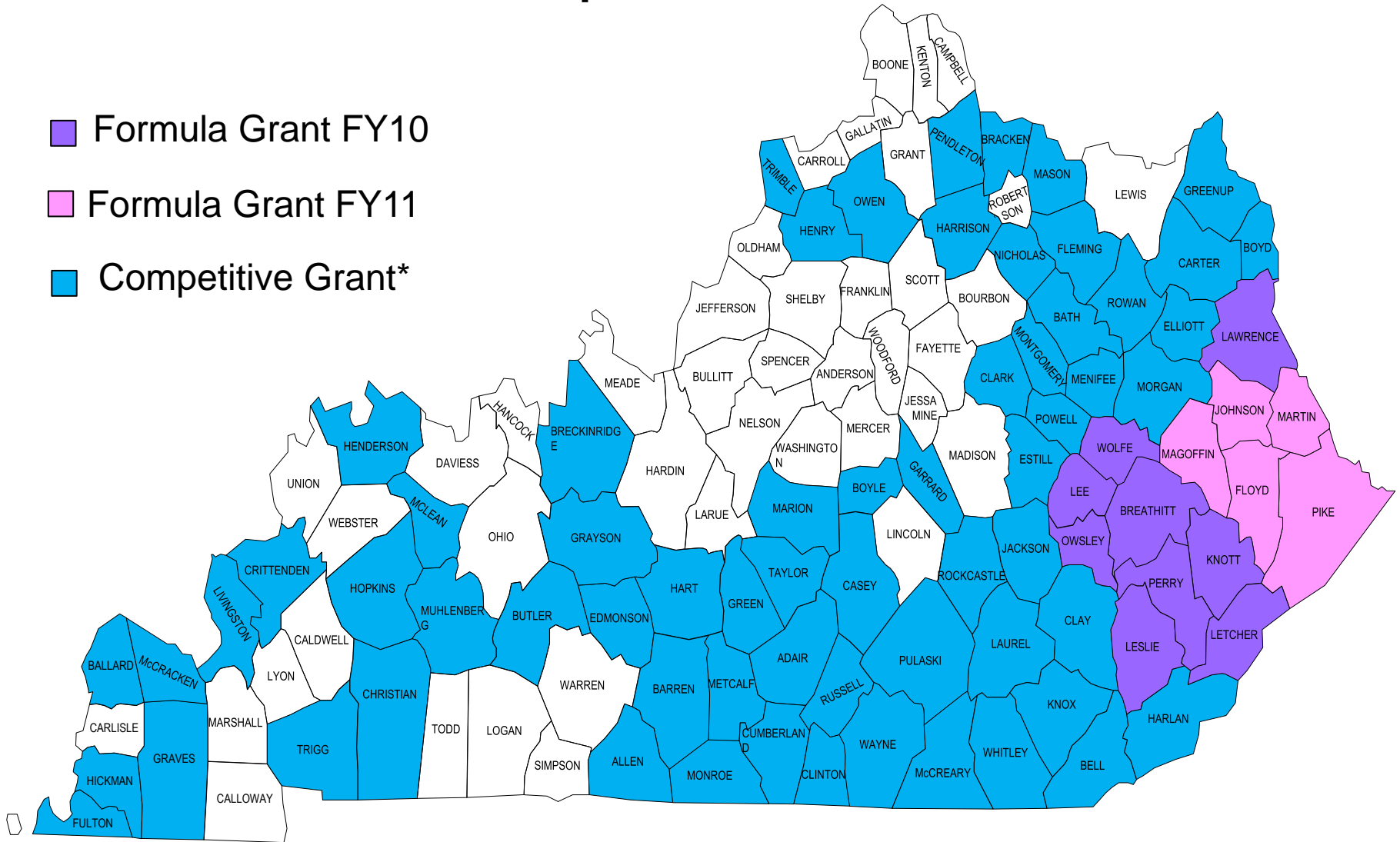


Home Visiting Grant Implementation Plan

- 1) *Expand HANDS to all at risk moms (not just first time parents)*
 - 2) *Add mental health brief interventions*
 - 3) *Improve systems of care and referral for at risk families with children birth to three*
- **Communities at Risk:** 9 high risk counties: Owsley, Lee, Wolfe, Leslie, Letcher, Knott, Perry, Breathitt and Lawrence Counties
 - **Kentucky's Initial Formula Grant Allocation-** \$1.4 Million
 - **Year 2 Allocation \$ 1.9 Million** – expanding to 5 additional counties: Floyd, Johnson, Magoffin, Martin and Pike Counties
 - **Receiving Grant funding Requires Maintenance of Effort** – State's home visiting support must be maintained at or above current expenses as of March 2010 -- new funds cannot supplant existing efforts
 - **Kentucky completed a competitive grant process** and received further funding enabling services to be added in 64 additional counties

Services to > 1st time parents

Competitive Grant*

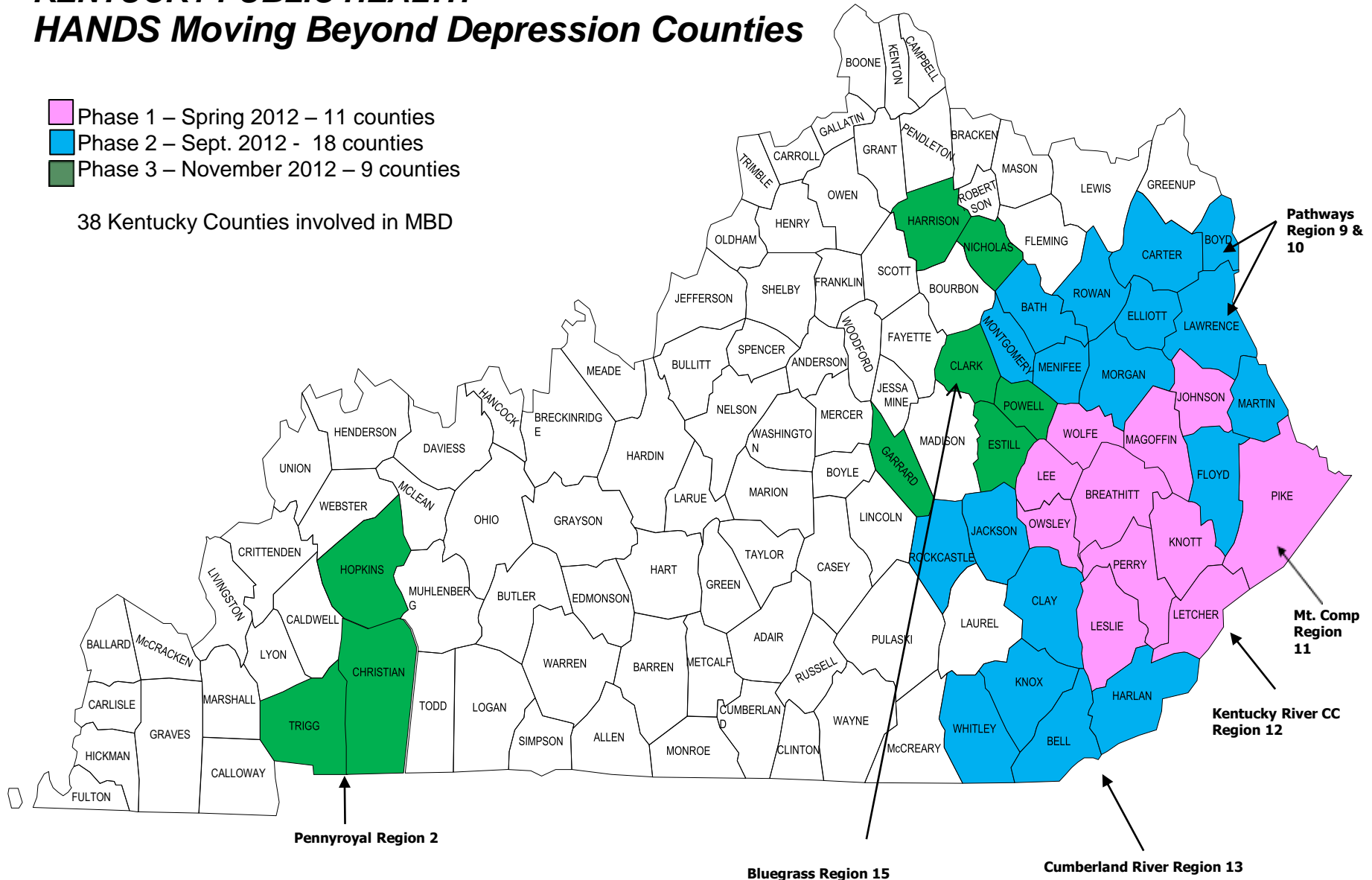


* Rollout currently in progress

KENTUCKY PUBLIC HEALTH HANDS Moving Beyond Depression Counties

- Phase 1 – Spring 2012 – 11 counties
- Phase 2 – Sept. 2012 - 18 counties
- Phase 3 – November 2012 – 9 counties

38 Kentucky Counties involved in MBD



ACTIVITY TO DATE FOR MIECHV

- Assessments – 1,442
- Families – 1,072
- Home visits – 17,304

FY13 Goals-

Assessments-2,162

Families – 2,521

Home visits- 36,351



LONG TERM IMPACT ON CHILDREN AND FAMILIES

- Brain, cognitive, and behavioral development are linked to both educational and health outcomes later in life.
- The contribution of a healthy pregnancy makes to optimal brain development might be comparable to that of parent/child interactions after birth (Thompson 2001)
- Social experiences in early childhood are linked to brain, cognitive, and behavioral development (RWJ, 2008)
- “The question of whether early childhood programs make a difference has been asked and answered innumerable times.” (IOM 2000)



THANK YOU



- Questions:
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